IN THE CLAIMS:

1. (Currently Amended) A method of demodulating at least one of a received phase and ~~/or~~ amplitude modulated signal comprising:

deriving from said received signal a first sequence or samples representative of the phase of the received signal;

deriving from said received signal a second sequence of samples representative of the received signal envelope;

combining respective ones of said first sequence of samples and said second sequence of samples to output a composite sequence of samples representative of said received signal; and

demodulating said composite sequence of samples.

2. (Currently Amended) A method according to claim 1 in which said second sequence of samples ~~are~~ is derived from a continuous time signal having a logarithmic relationship with the received signal level.

3. (Currently Amended) A method according to claim 1 ~~or 2~~ wherein said step of deriving said second sequence of samples comprises:

deriving from said received signal a continuous-time signal representative of the instantaneous amplitude or power of the received signal;

~~digitsing~~ digitizing said continuous-time signal and storing the digital samples generated ~~threby~~ thereby;

determining a reference value of the stored samples over a predetermined time duration; and

~~normalising~~ normalizing said stored digital samples utilizing said reference value to output said second sequence of samples.

4. (Original) A method according to claim 3 wherein said reference value is the peak amplitude or power value in said predetermined time duration.

5. (Currently Amended) A method according to claim 1, ~~2, 3, or 4,~~ wherein said step of deriving said first sequence of samples comprises:

hard-limit amplifying said received signal and performing phase detection on the amplified signal to generate a continuous-time signal representative of the absolute phase of the received signal; and

~~digitising~~ digitizing said continuous-time signal to output said first sequence of samples, whereby said first sequence of samples is a sequence of samples representing the absolute phase of the received signal.

6. (Amended) A method according to claim 1, ~~2, 3, or 4~~ wherein said step of deriving said first sequence of samples comprises:

hard-limit amplifying said received signal and performing phase detection on the amplified signal to generate a continuous-time signal representative of the absolute phase of the received signal; ~~and~~

~~digitising~~ digitizing said continuous-time signal to output a sequence of absolute phase samples; and

performing differential phase detection on said sequence of absolute phase samples to output said first sequence of samples, whereby the samples in said first sequence ~~characterise~~ characterize the phase shift between pairs of samples a predetermined number of ~~digitising~~ digitizing samples periods apart.

7. (Currently Amended) A method according to claim 5 ~~or 6~~ further comprising storing said first sequence of samples and providing each of said first sequence of samples for said combining step at times ~~synchronised~~ synchronized with said second sequence of samples.

8. (Currently Amended) A method according to claim 1, wherein ~~any preceding claims~~, said received signal comprises ~~being~~ a TDMA signal.

9. (Currently Amended) Apparatus arranged to receive at least one of a phase and~~/or~~ amplitude modulated signal comprising:

means arranged to derive from said received signal a first sequence of samples representative of the phase of the received signal;

means arranged to derive from said received signal a second sequence of samples representative of the received signal envelope; and

means arranged to combine respective ones of said first sequence of samples and said second sequence of samples and to output a demodulated representation of said received signal.

10. (Original) Apparatus according to claim 9 in which said second sequence of samples are derived from a continuous time signal having a logarithmic relationship with the received signal level.

11. (Currently Amended) Apparatus according to claim 9 ~~or 10~~ in which said means arranged to derive said second sequence of samples comprises:

means arranged to derive from said received signal a continuous-time signal representative of the instantaneous amplitude or power of said received signal;

~~digitising~~ digitizing means arranged to ~~digitise~~ digitize said continuous-time signal;

storing means arranged to store the digital samples from said digitising digitizing means;

determining means arranged to determine a reference value of the stored samples over a predetermined time duration; and ~~normalising~~ normalizing means arranged to ~~normalised~~ normalize said samples stored in said storing means utilizing said reference value to output said second sequence of samples.

12. (Original) Apparatus according to claim 11 in which said determining means determines said reference value to be the peak amplitude or power value in said predetermined time duration.

13. (Currently Amended) Apparatus according to claim 9, wherein ~~10, 11 or 12 in which~~ said means arranged to derive said first sequence of samples comprises:

hard-limit amplifying and phase detection means arranged to generate a continuous-time signal representative of the absolute phase of the received signal; and

~~digitising~~ digitizing means arranged to ~~digitise~~ digitize said continuous-time signal to output said first sequence of samples, whereby said first sequence of samples is a sequence of samples representing the absolute phase of the received signal.

14. (Currently Amended) Apparatus according to claim 9, wherein ~~10, 11 or 12 in which~~ said means arranged to derive said first sequence of samples comprises:

hard-limit amplifying and phase detection means arranged to generate a continuous-time signal representative of the absolute phase of the received signal;

~~digitising~~ digitizing means arranged to ~~digitise~~ digitize said continuous-time signal to output a sequence of absolute phase samples; and

differential phase detection means arranged to perform differential phase detection on said sequence of absolute phase samples to output said first sequence of samples, whereby the samples in said first sequence characterize the phase shift between pairs of samples predetermined number of ~~digitising~~ digitizing samples periods apart.

15. (Currently Amended) Apparatus according to claim 13 ~~or 14~~ further comprising storing means arranged to store said first sequence of samples and to output each of said first sequence of samples at time ~~synchronised~~ synchronized with said second sequence of samples.

16. (Currently Amended) Apparatus according to claim 13, wherein ~~14 or 15 in which~~ said hard-limit amplifying and phase detection means comprises one or more cascaded amplifiers and analogue filters arranged to output said continuous-time signal at a real intermediate frequency.

17. (Currently Amended) Apparatus according to claim 13, wherein ~~14 or 15 in which~~ said hard-limit amplifying and phase detection means comprises one or more cascaded amplifiers, a quadrature down-mixing circuit and analogue filters arranged to output said continuous-time signal as a complex baseband signal having two components.

18. (Original) Apparatus according to claim 17 wherein said two components are orthogonal.

19. (Currently Amended) Apparatus according to claim 9 ~~any of claim 9 to 18~~ arranged to receive and demodulate a TDMA signal.

Please cancel any multiple dependent claims which may remain after amendment.